esrcmap

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Abstract

This task constructs a model image purely of contribution from sources.

1 Instruments/Modes

Instrument	Mode
EPIC	Imaging

2 Use

pipeline processing	yes
interactive analysis	yes

3 Description

As in the abstract.

4 Parameters

This section documents the parameters recognized by this task (if any).

Parameter	Mand	Type	Default	Constraints
srclisttab	yes	table		

The input source list.

expression	no	string		

Selection expression for the sources.

racol	no	string	RA	

Name of the column in which to find the source RAs in decimal degrees.

deccol	no	string	DEC	

Name of the column in which to find the source Decs in decimal degrees.

ratecol	no	string	RATE	

Name of the column in which to find the source brightness values.

templateset	yes	dataset		

The output image has the same pixel dimensions and World Coordinates as this template image.

outset	no	dataset	src_image.ds	

Name of the output dataset.

psfenergy	yes	real		0 <`psfenergy`

The user should supply the energy (in eV) at which the source PSFs should be obtained.

energyfraction	no	real	0.99	0 <`energyfraction`< 1

The PSF image array is obtained with a size such that it contains this fraction of the PSF. Thus the closer to 1, the larger the area devoted to each PSF. Choosing a small value will speed up processing, but too small a value will be noticeable as a truncation into a small square of the source images.

tempimageset	no	dataset	temp_image.ds	

Needed for pipeline useage.

5 Errors

This section documents warnings and errors generated by this task (if any). Note that warnings and errors can also be generated in the SAS infrastructure libraries, in which case they would not be documented here. Refer to the index of all errors and warnings available in the HTML version of the SAS documentation.

dummy *(error)*
**********dummy

6 Input Files

There are three types of FITS image input, listed below. All input images must share the same dimensions.

1. (Mandatory) a dataset containing a table of source positions. The dataset and table names, separated by a colon, should be supplied to parameter `srclisttab`.
2. (Mandatory) a FITS dataset which contains an image in its primary extension. The name of this dataset should be supplied to parameter `templateset`. The output image (`outset`) is constructed so as to match `templateset`'s pixel dimensions and World Coordinates.

7 Output Files

The output dataset contains a 32-bit-real-valued image which is a model of the count rate at each pixel which would be expected from the sources given in the input list.

8 Algorithm

**********Not yet written.

9 Comments

References